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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,998	01/05/2005	Shigeki Kambara	3273-0196PUS1	5132
2292 7590 09/14/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER CHU, JOHN S Y	
			ART UNIT 1752	PAPER NUMBER
			NOTIFICATION DATE 09/14/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/519,998	Applicant(s) KAMBARA ET AL.	
	Examiner John S. Chu	Art Unit 1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/20/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office action is in response to the response filed August 29 2007.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 6-13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by KODAMA et al (2002/0102491).

Claims 6-13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over KODAMA et al (2002/0102491).

The claimed invention is now drawn to the following:

6. (previously presented) A photoresist resin comprising at least a constitutional repeating unit A containing a group capable of partially leaving by the action of an acid to thereby become soluble in an alkali; and a constitutional repeating unit B containing an alicyclic skeleton having a polar group,

wherein the resin

(i.) has a weight-average molecular weight of 3000 to 15000 and

(ii.) has a molecular weight distribution (M_w/M_n , wherein M_w is weight-average molecular weight and M_n is number-average molecular weight) of from 1.1 to 3.5 and

(iii.) has a content of polymer fractions each having a molecular weight exceeding 40000 of 4 percent by weight or less of the total resin.

with new claims 12-13 added drawn to the following:

12. (new) The photoresist resin of claim 6, having a turbidity, measured in accordance with Japanese Industrial Standard (JIS) K 0101, of from about 0 to about 10.

13. (new) The photoresist resin of claim 6, having a turbidity, measured in accordance with Japanese Industrial Standard (JIS) K 0101, of from about 0 to about 3.

KODAMA et al disclose a positive photosensitive composition comprising a compound which generates a specified sulfonic acid and a resin capable of decomposing under the action of an acid to increase the solubility in an alkali-developer. Applicants are directed to Table 5 on

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page 37 paragraph [462] wherein resins (P11), (P15), (P19) and P(20) disclose resins made from monomers defined as b54, b55, b56, b1, b62, a5, b63, b64, b65 as seen on pages 48 - 54 which meet the recited constitutional repeating units of A and B. The weight average molecular weight of the resins are (P11), (P15), (P19) and P(20), are 400, 11,000, 11,000 and 13,000, respectively and having a degree of dispersion (Mw/Mn) of 1.9, 1.8, 1.9 and 2.2, respectively.

These resins are exemplified in Examples 51, 52, 58-60 and 63-67 in Table 6 and 7 found on pages 73 and 74 and provide compositions which have high sensitivity, resolution and exposure margin.

The claims are anticipated by the disclosure and no claims are allowed.

The arguments by applicants have been carefully considered, however the rejection is maintained wherein the reference fails to disclose polymer fractions having a molecular weight exceeding 40,000 of 4 percent or less of the total resin. The parameter by inherency is not a stretch to reach based on the average molecular weight being sufficiently low and the degree of dispersion is close to 1 such that the polymer units would not be large and they would have to be small to meet those parameters. If Applicants can show objectively through evidence that the polymer fractions in KODAMA et al at 40,000 are in an amount greater than 4% of the total resin then the rejection can be overcome, otherwise the rejection is maintained.

With respect to new claims 12 and 13, the same components are present in KODAMA et al as claimed and disclosed, such that the turbidity would inherently fall within the claimed ranges based on the fact that the compounds and their properties are inseparable. If Applicants can show through objective evidence that the turbidity or the polymer fractions fail to meet the claimed invention, then the rejection may be overcome.

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3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chu whose telephone number is (571) 272-1329. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Cynthia Kelly, can be reached on (571) 272-1526

The fax phone number for the USPTO is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John S. Chu/

Primary Examiner, Group 1700

J.Chu

September 7, 2007